

Claims

1. (currently amended) A method of increasing ~~or decreasing~~ one or more of hair follicle development, tooth development, or sweat gland development, in a tissue, comprising ~~altering~~ increasing EDA1-II activity in the tissue.

2. (currently amended) The method of claim 1, wherein method is a method of increasing ~~or decreasing~~ hair follicle development.

3. (currently amended) The method of claim 1, wherein method is a method of increasing ~~or decreasing~~ tooth development.

4. (currently amended) The method of claim 1, wherein method is a method of increasing ~~or decreasing~~ sweat gland development.

5. - 21. (canceled)

22. (currently amended) The method of claim 5~~1~~, wherein increasing EDA1-II activity comprises administering an amount of EDA1-II protein to the tissue sufficient to promote one or more of hair follicle development, tooth development, or sweat gland development.

23. (original) The method of claim 22, wherein the EDA1-II protein is a recombinant protein.

24. (original) The method of claim 22, wherein the EDA1-II protein comprises an amino acid sequence having at least 95% identity to SEQ ID NO: 2 and which encodes a polypeptide that enhances EDA1-II activity in the tissue.

25. (original) The method of claim 24, wherein the amino acid sequence comprises an amino acid sequence having at least 98% identity to SEQ ID NO: 2 and which encodes a polypeptide that enhances EDA1-II activity in the tissue.

26. (original) The method of claim 25, wherein the amino acid sequence comprises an amino acid sequence shown in SEQ ID NO: 2.

27. - 40. (canceled)

41. (currently amended) The method of claim 5~~1~~, wherein the tissue is a tissue of a subject suffering from an ectodermal disease.

42. (original) The method of claim 41, wherein the ectodermal disease is XLHED, autosomal HED, or alopecia.

43. - 58. (canceled)

59. (new) The method of claim 22, wherein the EDA1-II protein comprises at least 153 amino acids of SEQ ID NO: 2.

60. (new) The method of claim 22, wherein the EDA1-II protein comprises at least 175 amino acids of SEQ ID NO: 2.

61. (new) The method of claim 22, wherein the EDA1-II protein comprises at least 200 amino acids of SEQ ID NO: 2.

62. (new) The method of claim 22, wherein the EDA1-II protein comprises at least 300 amino acids of SEQ ID NO: 2.

63. (new) The method of claim 22, wherein the EDA1-II protein is a fusion protein.

64. (new) The method of claim 59, wherein the EDA1-II protein comprises 1-10 amino acid substitutions.